Neophyte Nook
Benefits of the Double Berm

Before discussing the double soil berm, let’s review the basics of the soil berm itself.

Because of our tight clay soils in the low desert and the inherent runoff factor with most methods of irrigation, a six-inch high-and-wide circular berm of soil is typically placed around trees and shrubs. Recalling where plant feeder roots congregate — at the canopy drip line and beyond — the soil berm is placed slightly beyond this drip line and expanded periodically as the plant canopy expands. The basin between the plant’s trunk and the soil berm is kept level, and is flood irrigated via garden hose or system bubbler.

So far, so good; until you lose a tree to Phytophthora, a.k.a. Brown Rot Gummosis, Foot Rot, etc. Nasty stuff. It’s like fighting shadows. On day, usually in August, your tree looks great and three days later it’s beyond hope with leaves thoroughly wilted and turning crispy. Of course, not all plants are susceptible to crown rots like Phytophthora, but keeping the trunks of more valuable plants, such as landscape trees, dry is a good habit to get into.

Which brings us to the inner soil berm, placed in a circle roughly 6 inches away from the trunk of the plant. Don’t let the soil mound up on the trunk, and keep the water within the basin between the two berms.

Are berms necessary when using a slow drip system? They sure help at fertilization time. Unless you’re running liquid fertilizer through your drip system (which requires a pricey RP backflow device), the product must be broadcast under the plant canopy and flood irrigated in for best results.

They’re also great for holding your mulch in place during the hot months.

Michael W. Mekelburg
Master Gardener

Starting All Over Again
Garden Renovation

When we arrived at our current house we found a fantastic number of creosote, a few choice succulents, a good sized blue palo verde, a towering Mexican palo verde in the back, a wildly overgrown African sumac and a mimosa dead center as you walked out the back porch. We considered ourselves lucky because that was absolutely all there was on the place. Soon we began the first of hundreds of conversations that opened with the line “now when we remove that mimosa, we could then ...”. That signaled the beginning of what is an inevitable, and for some of us, a dreary, process of garden renovation.

Sooner or later, the boxes will get unpacked and it will be time to look over the yard and really start to consider what can be done with it. One will burn with the cause of redoing the yard, hating the way that tree sheds, or the complete idiocy of the placement of those mighty Photinia. Changing out a yard for one more congenial and suitable to yourself does not have to be traumatic, in fact I think it can be fun. But unless your budget will stand a complete overhaul in one monumental effort, it might take some time. Over the years and a number of overhauls I can suggest a few tips to help ease the transition from what you have, to what you crave.

Look at it a lot before you do anything. Sit out there, walk around out there, even if it is hot, or ugly, or repulsive, or messy. Get a feel for the place and how it could look and feel to you in the future. A lot of the great satisfaction of gardening is in the making and execution of long held plans, so give them a chance to flourish.

Locate large features first. If you want anything special or particular, like a vegetable garden, a pond or pool, play area for children, or barbecue center find where you want it and hold that spot. Even if you don’t build it first, holding the spot will save agonies of rearrangement later. It also begins to give the place shape and purpose, at least in your imagination.

We kept our patio as a scraped piece of dirt for years before we gathered the money and the will to put down the stone which we truly wanted. But in the meantime,
Starting All Over Again (Continued from page 8)

it was the right size, shape and we used it all the time. It
gave us the chance to plant around it right away, because
we knew where it would be, and once the stone was in,
it really looked smashing because there was such a
wonderful compliment of plants along its edge.

Lay it out on the ground. Even if you love to draw and
see the plans, use something temporary and flexible to
start laying out the garden as you think it out. This could
be hoses, or strings, or old bits of yarn. If you want
paths, put them in this way, then use them and see if they
really get you there the way you want to be taken. It will
help you see how much room you are really setting aside
for the koi pond, and if that is really how much you need.

Attend to the fence. If there is an unacceptable or
unsightly fence, fix, remove or replace it as soon as you
can. If no other option is available, hide it. This gives
the yard immediate structure and a good background for future plantings. We had a house once
that had a tottering grapevine fence, mercifully covered
for most of its length by assorted bushes and trees. But
a kindly neighbor gave us a large number of variously
painted block that we just stacked into a corner to give us
relief from the most hideous part of the fence and the
yard. It brought the entire yard into focus and held up
the fence for years to come.

Remove the grass. If there is more grass than you want -
and you should really consider having ever so tiny
amounts if any at all - get rid of as soon as possible. No
matter how optimistic the advertisements and the
recommendations, it will take a persistent and consistent
program to get rid of it over a matter of a few months.
No time like the present, and just like in painting a room,
it goes much better without all the furniture in the way.

Remove plants one at a time. Start evaluation of the
existing plants with the trees. How many are there, do
you like them, do they do something meaningful in the
garden like provide good shade, or have lovely bloom, or
look good from a window, doorway or the patio. Or are
they unfortunate monsters, taking up all the best parts of
the garden and giving nothing back. Be brutal, be daring
and at this point don’t worry about how, squint it out in
your mind. Then begin to plan. Could you get rid of it?
If not, consider it permanent from that moment on and
just work with and around it. Get rid of what you don’t
want and are willing able to remove as soon as you make
the decision, then live with it a while and see how the
place looks. Think about and evaluate all the rest of the
plants the same way.

Introduce plants in large, visible bunches. In my own
yard, every space is a bed to me, they even have names.
Over here is the perennial bed, because most of the
plants are long blooming and herbaceous, over there is
the mesquite bed because that is the tree in the middle of
it, and so forth. And each was originally planted with a
group of plants initially, it makes it look real and lively,
even if they are too small at first. It also forces lazy
gardeners like myself to pay attention to the entire group.
I can easily lose or forget about one new plant, but an
entire bed is much harder.

Remember that change is inherent in a garden. So what
you change your mind. Rare is the plant that cannot be
removed, redone, or rethought. Eighty-foot tall
eucalyptus are difficult, but most things can be redone or
rethought. A friend just removed a small mound on
which he had some lovely succulents, had them for years
as a focal point for the patio. Sad loss you think, but
really it gave a whole new feeling to the small yard,
offering such a nice new perspective and sense of space,
it was like a much more extensive renovation had been
done than was indeed the case.

My last advice, do not be in a hurry. Go out there and
use your garden as soon as you get there and let the
process of building to meet your expectations be part of
the pleasure of building it. It takes years to achieve a
great garden, and wise gardeners know that the process
is often the very best part.

Mary F. Irish
Director of Public Education, Desert Botanical Garden
Landscaping with Citrus Trees

Homeowners intending to plant citrus trees should consider the following: location, mature size, fruit desired, spacing, water and fertilization needs.

Location Where are the citrus tree or trees to be planted in the yard? A full size tree will grow to be around 16 ft. in diameter and 20 to 28 ft. high. This means that the fruit will also be up to that height, and only accessible by ladder.

Mature Size Using dwarf citrus trees can sometimes provide room for more varieties of citrus to be planted in limited yard space. Dwarf citrus trees can be maintained at 9 to 10 ft. in diameter and from 10 to 12 ft. in height. Dwarf trees produce 50-60% of the fruit of a full size tree. The rootstock that has been in development since around 1941 for dwarf citrus trees is the “Flying Dragon” rootstock and is the root stock that I have experience with for the past 7 years on 3 trees. Selection of a dwarf tree can also be beneficial to retirees or persons that cannot access the fruit at the upper reaches of a full size tree.

Fruit Desired Selection of varieties is important so that the type of fruit that a homeowner likes is planted. Also, the varieties should be chosen so that fruit on all of the trees are not coming ripe at the same time. Publication AZ1001 (formerly MC87) provides information in the form of a short description of the different varieties that are best grown in our desert valley. A chart in the publication shows the approximate months that the fruit will be ripe.

Spacing The trees should be planted so that they will not interfere with the house or other buildings on the property or other plants or trees in the landscape when fully grown. They should also be located so that they will not interfere with overhead wires, roof overhangs or any other overhead structures. Locations near a building should allow at least 2 or 3 ft. from the fully grown tree’s dripline so that watering will not occur up to the building foundation. Watering at the building foundation can result in washing away the termite protection that is put there to keep termites from getting into the home’s structure. It is a good idea to avoid planting any plants near the home or other structure.

Watering Needs Watering of citrus trees should be done on a separate water line and timer setting from other plants and shrubs in the landscape. Adult citrus trees (3 years after being planted or older) need to be deep watered down to a 3 ft. depth of the soil. In the summer they should be watered every 10 to 14 days, and every 4 weeks in the winter months.

Fertilizer needs Fertilizing of citrus trees is done 3 times per year and publication MC91 provides the information on when to fertilize and how much fertilizer to use based on the percentage of nitrogen in the fertilizer.

George Chott
Master Gardener

NEW DESERT GARDENING BOOK!

Desert Gardening for Beginners: How to Grow Vegetables, Flowers and Herbs in an Arid Climate is the second book published by Arizona Master Gardener Press. Everything you need to know to grow fresh, tasty vegetables, fragrant herbs and colorful flowers is covered. The authors, Cathy Cromell, Linda A. Guy and Lucy K. Bradley, have translated the most current horticultural information from University of Arizona researchers into easy-to-understand language for new gardeners.

There are chapters on desert soil characteristics, soil preparation, removing Bermudagrass, garden design and location, making compost, planting and tending, effective watering, managing insects and diagnosing problems, as well as specific pointers for vegetables, flowers and herbs.

As an added bonus, the book also includes three planting calendars that provide the best months to sow hundreds of vegetables, flowers and herbs for maximum success. By following the basic guidelines in Desert Gardening for Beginners, you will soon discover the joys of gardening year around in the desert.

The book can be purchased at the Extension Office, Satellite Offices, bookstores (ISBN 0-9651987-2-3), or through the mail. Cost is $7.95, plus $2.00 shipping. Make checks payable to University of Arizona and mail to Arizona Master Gardener Press, 4341 E. Broadway Road, Box 100, Phoenix, AZ 85040-8807.
Drip Irrigation Demystified

Your irrigation system is the heart of your landscape. A properly installed system will enable you to keep your plants healthy with minimum effort. While there are many types of irrigation systems, we are going to focus on drip irrigation. Drip irrigation is easy to install and great for your plants. The following information is for the do-it-yourself home owner. However, this information will also be helpful to anyone who is planning to hire a landscape contractor so that you will know what is expected of them. Before you proceed, there are some things you need to know which can save you time, money and reduce your maintenance.

Design

A good irrigation system starts with a good design. This will help you determine how many valves you need and the potential cost involved.

Plants should be grouped together on an irrigation valve according to common water usage. For example, it is not a good idea to put dwarf oleanders and roses on the same irrigation valve, because they have different watering needs. At a minimum, I recommend that front yard shrubs and groundcovers be on one valve, back yard shrubs and groundcovers be on another valve, trees be on their own valve, and grass be on its own valve. Other valves should be added for raised planting beds, vegetable or herb gardens, plants of high water use, and extremely shady areas. The more irrigation valves you have, the greater your flexibility in watering your plants.

Putting in an irrigation system is always easier when working with bare dirt than doing a landscape conversion from grass to Xeriscape. There is more flexibility to decide where irrigation lines will be installed and how many irrigation valves will be needed. If doing a conversion, you may want to abandon the existing irrigation system if it is more than 15 years old. Some existing sprinkler systems can be converted to drip by either adding a pressure reducing valve after the irrigation valve or using pressure compensating multi-port emitter heads in place of sprinkler heads.

Irrigation Equipment

When it comes to purchasing irrigation equipment, I recommend going to a good irrigation store. Bring a diagram of your yard with you, showing the measurements of the areas to be landscaped. You generally get better equipment and better advice that way.

Measure the distance of your proposed irrigation lines. It will help you determine how much pipe (PVC or polyethylene) you will need. You want a good commercial grade of polyethylene pipe and schedule 40 for all your PVC. The thicker walls will increase its longevity.

You will need to purchase a good vacuum breaker (anti-siphon) valve. This is what protects you and your family from back-flow contamination. A pressure vacuum breaker is what I normally recommend. It must be installed at least 12-in. above the highest point on your irrigation system. You then can add as many control valves in an irrigation box(es) anywhere in your yard. For those homeowners with a high back yard or who want raised planted boxes, you may be required to install a reduced pressure back-flow prevention assembly. It must be 12-in. above the ground. I do not recommend atmospheric vacuum breakers. They cannot be tested to determine if they are still working to protect you from back-flow contamination.

All piping above ground should be type K copper. Place unions on your above ground copper pipe to facilitate easy removal and re-attachment of vacuum breaker, if needed. I also recommend 1-in. irrigation valves and 1-in. PVC pipes going to the valves. They allow more water volume to enter the distribution pipes throughout your yard. This is important for long irrigation runs.

After the irrigation valves, install a filter, then a pressure regulator. The filter will catch any debris that may plug an emitter. The pressure regulator ranges from 10 to 30 PSI. It is designed to reduce the water flow in distribution pipes so that emitters can function properly.

Installation

Installing a drip irrigation system is easy. The only instance for outside help would be the installing of the vacuum breaker, if you are not comfortable in working with copper; connecting an automatic timer into your breaker box, if you are not experienced in electrical wiring; and maybe digging the trenches for the irrigation lines if the ground is very hard.

Continued on page 12.
Irrigation (Continued from page 11)

More than one irrigation pipe can be installed in the same trench. When you do this, spray paint the pipes a different color. This will help you in selecting the correct pipe for connecting spaghetti tubing from your polyethylene laterals to the plants. A tip I recommend is to use PVC schedule 40 pipe from your valves to where your planting area starts, then change to polyethylene pipe.

Emitters are what controls the flow of water to your plants. They come in ½-, 1- and 2-gal. per hour. They can be installed above or below ground. There are pros and cons of each procedure. I recommend 2-gal. per hour emitters for trees and large shrubs and 1-gal. per hour for small shrubs and groundcovers. I also recommend installing 6 to 10 emitters per tree out to the proposed canopy area of the tree. By doing this when there is bare dirt, it prevents having to remove granite, locate the lateral lines and then add the additional emitters. However, the first year, these lines should have plugs in them. After one year, remove the plugs and install the emitters. This only leaves the two emitters, on each side of the tree trunk, installed half way between the tree trunk and end of root ball, to be relocated outward.

Watering Schedule

Many people in the spirit of water conservation water improperly. They shallowly water their plants from every day to twice a day. For plant health, water infrequently, but water deeply. This reduces the salt build up in the soil which is detrimental to plants. I hardly ever water any plant every day, even a newly planted plant. Most newly planted plants can do very well being watered every 2-3 days. Generally, the more mature the plant, the greater the number of days between watering. I water plants that are two years old and more, from once per week to twice per month. When the temperature gets over 100°F, then I may water more frequently.

When plants are watered, water them deeply. How long to water depends on the size of your emitters and your soil composition. Plants in sandy soil will need to be watered more frequently than plants in clay soil. One gal. per hour emitters may need to run longer than 2-gal. per hour emitters. I generally start out by watering plants 45 min. with 2-gal. per hour emitters and 1 hour with 1-gal. per hour emitters. I like to wait for about an hour after watering and use a soil probe to determine the depth the water has reached. A soil probe should penetrate from 1-2 ft. for shrubs and from 2-3 ft. for trees, depending on their maturity. This helps me determine if the scheduled water cycle is long enough to saturate the root zone. As the plant matures, the root zone expands. More water will be needed to thoroughly saturate the root zone. However, the deeper the root zone, the less frequent the plant will need to be watered.

Maintenance

It is a good idea to walk your property frequently to make sure all your plants are being watered. Look for signs of stress in your plants. Emitters can get plugged. Replace emitters that are not working properly.

It is also a good idea to flush out your drip lines annually. Installing flush-end caps on your drip pipes makes this easy. These flush-end caps can be placed into a round irrigation cylinder for ease in getting to them. Also, check the filter that is next to each irrigation valve at least annually. These filters may need to be flushed out or replaced.

Please don’t be intimidated by all the above. Drip irrigation is really a good way to irrigate plants. The main thing is to jump in and get involved with your irrigation system. The more you work with it, the more comfortable and confident you will become. If the above information still intimidates you, call me.

David Schultz
Master Gardener

Rarin' to Grow

Flowers: Sunflowers, vinca (Jul.), yellow cosmos (Jul.-Aug.).

Vegetables: Pumpkins, pepper transplants (Jul.), pinto beans, winter squash (Jul 15-31), snap beans, corn, tomatoes (Jul. 15-Aug.), carrots, green onions (Aug.), cauliflower, cucumbers, kale, leaf and head lettuce, leeks (Aug. 15).
Top Ten Landscaping Tips

My training is in horticulture, not landscape design, and I have never claimed to possess the creative skills of a landscape designer or architect. However, I do recognize and appreciate a great landscape when I see one. One day I noticed that the landscapes I liked best (granted we all have different tastes) had some common features; and that’s how I came up with my top ten landscape tips.

1. **Graded Yard** - Grading your yard gives it a more natural look and creates more dimension and interest in the landscape, it will also capture rainfall better. Don’t make mounds greater than 1 ft. in height over grade or it may look unnatural. Make mounds irregular in shape, not perfectly symmetrical and sloped. Create swales (low spots) to capture water and direct water to your plants, not the street.

2. **Boulders** - Use boulders to accent the landscape. A grade of boulders called “surface boulders” look more natural and the color usually matches the natural colored granites. Bury boulders to a depth of at least 1/3 of their height, and place plants close to them to soften them.

3. **Granite** - Use 1/4- or 1/2-inch minus granite (not screened granite), as this provides a more natural desert look and is easier to walk on. Use natural colors like desert gold or beige.

4. **Group Plants** - Place plants in natural plant groupings as you would see in the desert. Don’t space plants evenly around the yard. Plant groups in odd numbers, and remember that open space is okay.

5. **Views** - Try to block or enhance views. You may want to block an unsightly view, such as the truck your neighbor parks on the street, or enhance a scenic view that you have of the mountains. Or create your own special vista by placing plants to provide a view of your landscape when looking out of a window.

6. **Common Theme** - Don’t plant one of every plant you like in a small landscape, it will tend to look like a botanical garden. Use the same plant in different locations of the yard to unify the look.

7. **Energy Conservation** - Be sure to block southern and western exposures of your home from the summer sun. Use deciduous trees for these exposures so that you can take advantage of the sun’s warmth in the winter.

8. **Hardscapes** - Hardscape is the inclusion of any non-plant features for the landscape, such as patios, benches, flagstone walkways, sculptures, bird features, etc. These areas can provide sitting areas or barbeque space and will extend your living space to the outdoors. It is usually best to plan and install these areas before plant installation.

9. **Flowers** - Plant wildflowers that will reseed themselves and provide seasonal color and charm to your landscape year round. Some suggested flowers are penstemons, desert marigold, golden dyssodia, tufted evening primrose, poppies, and lupines.

10. **Native Plants** - Use plants that are native to the Sonoran, Mohave or Chihuahuan deserts for best performance. These deserts are all found in the Southwestern U.S. and in Mexico. Plants from deserts from other continents (i.e. Africa or Australia) will usually perform well, but the look may not always fit (i.e. large Eucalyptus trees).

There are many other considerations for landscape design. Consult Sunset Western Landscaping Book or talk to a Landscape Designer/Landscape Architect for more information. Did you know that Chandler, Mesa, Glendale, Scottsdale and Tempe offer cash rebates if you install a low-water-using landscape? Call your City Water Conservation Office to see if you can qualify.

Donna DiFrancesco  
Master Gardener
"Oh, For The Green, Green Grass of Home..."
(Continued from page 7)

Water  Investigate and plan a good automatic irrigation system to make your lawn a lot happier and a lot healthier, plus to reduce waste of this precious commodity.  Look on the expense of a good lawn irrigation system as an investment, not a cost.  A properly watered and maintained lawn, planted with the correct turf species does not have to be a water waster, as many turfgrass species such as the bermuda grasses are known for their drought tolerance.

Next step would be to plant properly.  As with any perennial garden planting, your soil preparation and planting process will have an enormous impact on the long term health and success of your lawn.  Good detailed information on lawn preparation and planting is available from local lawn seed or sod suppliers, as well as the University of Arizona and your local Extension Office.  Bottom line: prepare the soil well.  Don’t just throw the grass sod or seed on top of the soil and expect it to thrive.  A poorly prepared lawn soil will mean long- or short-term failure and will certainly cause you to waste water in trying to keep your struggling turf alive.

Lastly and just as important, maintain properly.  Think of your turfgrass plants as if they were trees or shrubs in your landscape.  If you don’t maintain them well, they will be more susceptible to stress from temperature extremes, disease, insects, etc.  and will require larger inputs of chemicals, water, time and energy just to stay alive.  As the weather changes, check with your local water company or in the gardening section of the newspaper for correct water amounts for the various times of the year.  Remember again that your lawn is a group of garden plants: you certainly don’t water your trees, flowers or vegetables the same amount all year.

Please don’t copy your neighbor in your lawn maintenance practices, merely assuming they know what is best for your yard also.  Just because a nearby homeowner waters his lawn at midnight twice a week, or the local golf course waters their fairways every morning for 20 minutes or your local school or park mows twice a month immediately after fertilizing does not mean that you should do the same.  You sure don’t butcher your old mulberry trees, just because that guy at the end of the block does it every year?  Correct turfgrass maintenance (mowing, fertilizing, watering, overseeding, etc.) differs drastically from site to site depending on the soil type, the mowing height, sun exposure, amount of use or play, the grass variety or kind planted, disease and insect pests present, and many other factors.

Read the materials provided by your local garden center or Extension office, take a class in turfgrass maintenance at your local college or even attend the desert turfgrass session planned for the upcoming Low Desert Gardening Conference in late July.  Start thinking of your lawn as a grouping or planting of long-lived perennial plants and treat them as such, rather than as The Great Mystery.

Mike Hills
Master Gardener
Research Agronomist, Seed Research of Oregon

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Harvest Recipes

Melon Parfait

1 pkg. frozen raspberries
⅛ c. currant jelly
2 tsp. cornstarch
⅛ tsp. almond flavoring
6 c. melon balls or chunks

Mix raspberries and jelly and bring to a boil in a saucepan.  Dissolve cornstarch in water.  Add to raspberry mixture.  Simmer several minutes until thick.  Add almond flavoring.  Cool.  Divide melon balls into 8 sherbert glasses.  Spoon sauce over the top.  Makes 8 desserts.